

## Undescribed Species of Crane-Flies from the Eastern United States and Canada (Dipt.: Tipulidae).

### Part X

By CHARLES P. ALEXANDER, Massachusetts State College,  
Amherst, Massachusetts

The preceding part under this general title was published in ENTOMOLOGICAL NEWS, 55: 241-247; 1944. Acknowledgment of sources of specimens discussed herewith will be given under the individual species.

#### **Tipula (Arctotipula) thulensis** n. sp.

Allied to *besselsi*; size large (wing, male, 17 mm.); general coloration gray, the praescutum with four darker plumbeous gray stripes; vestiture of head and thorax very long and conspicuous, chiefly black, that of the meron paler; antennae black throughout, flagellar segments chiefly subcylindrical, the verticils exceeding the segments; wings with a very faint brownish tinge, stigma oval, dark brown; male hypopygium with the tergite extensively covered with short black setae, somewhat more concentrated near the mesal portion of the lobes; caudal border of tergite with a relatively small U-shaped median notch, no ventral spinous armature; outer dististyle oval, yellow, the tip obtuse; inner dististyle narrow, the flattened beak obtuse; outer margin at near three-fourths the length with a strong, slightly curved black spine; outer basal lobe a slender glabrous blade.

♂. Length about 14 mm.; wing 17 mm.

Frontal prolongation of head relatively short, dark gray, conspicuously clothed with long black setae; nasus conspicuous. Antennae short, black throughout, scape pruinose; flagellar segments short-suboval to subcylindrical, with scarcely developed basal swellings; verticils longer than the segments. Head gray, with abundant black setae; anterior vertex broad; no vertical tubercle.

Pronotum gray, with unusually abundant long dark setae, arranged primarily in a large group on either side. Mesonotum

gray, the praescutum with four darker plumbeous gray stripes that are poorly defined against the ground; interspaces, including the lateral border, with abundant erect black setae; posterior sclerites of notum similarly provided with long black setae, parascutella obscure testaceous yellow. Pleura light gray; dorso-pleural membrane buffy yellow; propleura, sternopleurite and meral region with long setae, the last group paler in color; pleurotergite and all dorsal pleurites, as well as the actual meron, glabrous. Halteres with stem blackened, knob conspicuously pale yellow. Legs with the coxae light gray, with very long conspicuous pale setae; trochanters gray; femora and tibiae obscure brownish yellow, the tips narrowly blackened; tarsi passing into black; claws (male) with a small tooth. Wings with a very faint brownish tinge to subhyaline; stigma oval, dark brown; cell *Sc* slightly darker than the remainder of ground; veins brown. Squama with setae; veins virtually glabrous; distal section of vein  $R_{4+5}$  with scattered trichia almost to base. Venation: *Rs* about three times *m-cu*; petiole of cell  $M_1$  longer than *m*.

Abdomen blackish gray, pruinose, the tergites slightly darker medially; posterior borders of segments narrowly yellow, more extensive on segments three to five; styli yellow. Male hypopygium with the ninth tergite extensively covered with short black setae, somewhat more concentrated near the mesal portion of the lobes; caudal border with a relatively small U-shaped median notch, the adjoining lobes lying slightly more ventrad, jutting beyond the level of remainder of tergite; lobes with abundant erect pale setulae; margin of notch glabrous or with exceedingly small microscopic setulae; no ventral spinous armature, such as in *besselsi* and *suttoni*. Outer dististyle an oval yellow lobe, about one-half longer than its greatest width, the tip obtuse; provided with abundant yellow setae, including a strong row near lower edge. Inner dististyle narrow, the flattened beak obtuse, glabrous; outer margin at near three-fourths the length with a strong slightly curved black spine; surface of blade opposite this spine with five or six black setae; outer basal lobe appearing as a slender glabrous blade.

*Habitat*.—Canadian Northwest Territories. *Holotype*: ♂. BAFFIN ISLAND, River Clyde, 70° North Latitude, June 1945 (Jack P. Woolstenhulme); through George F. Edmunds, Jr.

This interesting species is closest to *Tipula* (*Arctotipula*) *besselsi* Osten Sacken, *T. (A.) besselsoides* Alexander, and *T. (A.) suttoni* Alexander, differing from all in the structure of the male hypopygium. Lackschewitz (Trav. Ins. Zool., Acad. Sci. URSS, 4: 288–291; 1936) has placed *T. (A.) alascaensis* Alexander as a synonym of the north European *T. (A.) ciliata* Lundstrom, and *T. (A.) aleutica* Alexander as a synonym of *besselsi*, both quite incorrectly so. It may be emphasized that both *alascaensis* and *aleutica* are entirely valid species. It may further be noted that Lackschewitz's identification of *besselsi* (following Riedel) is not that species but is closer to the present fly though differing in all details of structure of the male hypopygium. *Tipula* (*Arctotipula*) *salicetorum* Siebke, of northern Europe, is more like *besselsi* yet again apparently quite distinct. It appears that there are rather numerous Arctic and Subarctic species in this subgenus and that these do not have the vast range over the Holarctic Region that was believed by Lackschewitz.

***Limonia* (*Geranomyia*) *remingtoni* n. sp.**

Size relatively large (wing, male, over 7 mm.); rostrum very long, approximately three-fourths the length of the body; mesonotal praescutum with three dark brown stripes; scutal lobes brownish black; pleura chiefly pale, the ventral sternopleurite a little darkened; femora brown, the tips conspicuously blackened; wings weakly tinged with gray, the oval stigma dark brown;  $Sc_1$  ending about opposite three-fifths  $R_s$ , cell  $1st\ M_2$  long, exceeding the distal section of vein  $M_{1+2}$ ; abdominal tergites bicolored, dark brown ringed with yellow; male hypopygium with the lateral tergal lobes low, widely separated, each with a group of blackened setae; ventral dististyle large and fleshy, its area about four times that of the basistyle, rostral prolongation short and stout, the two spines from very unequal tubercles; gonapophyses with the mesal-apical lobe long, straight and slender.

♂. Length, excluding rostrum, about 8 mm.; wing 7.4 mm.; rostrum about 6 mm.

Rostrum of unusual length, as shown by the measurements, being approximately three-fourths the length of remainder of body, pale brown. Antennae black; flagellar segments subcylindrical, with verticils that are shorter than the segments; terminal segment about three-fourths the length of the penultimate. Front, hinder portion of posterior vertex and occiput buffy yellow, the remainder of vertex brown, the narrowed anterior vertex a trifle paler.

Pronotum light testaceous yellow, the scutellum paler yellow. Mesonotal praescutum with three dark brown stripes, the interspaces only a trifle paler; humeral region extensively light yellow, the lateral borders of the sclerite less extensively so; median region of scutum testaceous yellow, the lobes brownish black; scutellum brown; postnotum dark brown, pruinose, pleurotergite abruptly whitened. Pleura, including the dorsopleural membrane, chiefly pale, the sternopleurite weakly infuscated, the metapleura almost white. Halteres short, stem testaceous, knob dark brown. Legs with the coxae greenish, the fore pair a trifle darker; trochanters light green; femora brown, the tips rather broadly and conspicuously black, the amount subequal on all legs; remainder of legs dark brown, the outer tarsal segments passing into black; claws with basal spine. Wings with a very weak grayish tinge, the prearcular field more whitened; stigma oval, dark brown, very conspicuous; veins brown, paler in the prearcular field. Venation: *Sc* long, *Sc*<sub>1</sub> ending about opposite three-fifths *Rs*, *Sc*<sub>2</sub> near its tip; *Rs* long; cell 1st *M*<sub>2</sub> elongate, exceeding the distal section of *M*<sub>1+2</sub> in length; *m-cu* at fork of *M*.

Abdominal tergites bicolored, the basal rings and, on the more proximal tergites, the very narrow caudal margin yellow, the slightly more extensive remainder of each segment dark brown; sternites yellow, on the posterior margins more darkened; eighth and ninth segments yellow, the styli more infuscated, especially the outer faces of the ventral dististyles. Male hypopygium with the tergite transverse, the caudal margin broadly and shallowly emarginate, glabrous except for the low widely

separated lateral lobes, each of which bears about 16–18 setae, the more lateral ones stouter. Basistyle small, its ventromesal lobe simple. Dorsal dististyle a strongly curved hook, a little widened on outer third, the distal end narrowed to the obtuse tip. Ventral dististyle large and fleshy, its area about four times that of the basistyle; rostral prolongation very short and stout, with two subequal rostral spines from very unequal tubercles, in one the tubercle about three-fourths as long as the spine, in the other a little more than one-third the spine. Gonapophysis with mesal-apical lobe long, straight, slender.

*Habitat*.—LOUISIANA. *Holotype*: ♂, Chalmette, Orleans Parish, October 17, 1944 (Charles L. Remington).

I take great pleasure in naming this species for Mr. Charles L. Remington, to whom I am greatly indebted for Tipulidae from various parts of the United States, New Caledonia and the Philippines. It is very distinct from the other regional members of the subgenus in the unusually long rostrum, coloration of the body, wings and legs, and in the structure of the male hypopygium. The darkened stigma is most like that of the otherwise distinct *Limonia* (*Geranomyia*) *perfecta* Alexander (Arizona to Mexico).

#### **Dicranoptycha microphallus n. sp.**

Size small (wing, male, under 7.5 mm.); general coloration brownish gray, the praescutum without distinct stripes; antennal flagellum black; legs pale brownish yellow, all pairs generally similar, tips of femora and tibiae undarkened; wings with a faint brownish tinge, the costal border narrowly light yellow; costal fringe (male) short; *m-cu* about its own length beyond the fork of *M*; abdomen brown, the subterminal segments brownish black; male hypopygium with the outer dististyle relatively slender, strongly curved to the long black terminal spine, the surface of outer half with abundant spines but no setulae; gonapophyses dark-colored, the mesal apical lobe relatively slender, the tip obtuse, pale; aedeagus unusually small and slender, especially the outer third or fourth which is pale and even narrower.

♂. Length about 6.5 mm.; wing 7.2 mm.

Rostrum and palpi black. Antennae with scape and pedicel brown, flagellum black; verticils long and conspicuous. Head light gray; anterior vertex broad.

Pronotum gray. Mesonotum brownish gray, the praescutum without distinct stripes, the ground appearing light brown, heavily pruinose; median region of scutum and the scutellum paler brown; pleurotergite similarly pruinose. Pleura yellow, clearest on the ventral portion, somewhat darker on dorsal half, the region below the dorsopleural membrane conspicuously darker. Halteres yellow. Legs with the coxae and trochanters yellow; remainder of legs pale brownish yellow, all similar to one another, the tips of the femora and tibiae undarkened; tarsi passing into brown. Wings with a faint brownish tinge, the prearcular region and narrow costal border light yellow; no stigmal or other darkening; veins light brown, paler in the yellow portions. Costal fringe short. Venation:  $Sc_1$  ending a short distance beyond the fork of  $Rs$ ,  $Sc_2$  a little removed from its tip;  $m-cu$  about its own length beyond the fork of  $M$ ; cell 1st  $M_2$  subequal in length to or a trifle longer than  $M_4$ .

Abdomen brown, the subterminal segments brownish black, the ninth segment again paler, the basistyles yellow. Male hypopygium with the outer dististyle relatively slender, strongly curved to the long black terminal spine; surface of outer half with abundant semierect spines, those of outer half somewhat more appressed; a few delicate setulae on basal portion of style but lacking among the spines. Inner dististyle longer, very gradually narrowed outwardly, the tip broadly obtuse. Gonapophyses dark-colored, the mesal apical lobe relatively slender, the tip obtuse, pale. Aedeagus unusually small and slender, especially on its outer third or fourth which is even narrower and pale; on basal half the width of the aedeagus is about equal to that of the mesal-apical lobe of the gonapophysis across its base.

*Habitat*.—GEORGIA. *Holotype*: ♂, Blood Mountain, September 11, 1945 (*P. W. Fattig*).

I am indebted to Professor Fattig for several very interesting Tipulidae from Georgia. The nearest ally of the present fly is

*Dicranoptycha septemtrionis* Alexander, of the northeastern United States. This has the hypopygial structure most like that of the present fly but differs in all details, particularly the stouter aedeagus and the different armature of the outer dististyle.

***Neolimnophila capnioptera* n. sp.**

Allied to *ultima*; praescutal stripes distinct; wings narrow, with a strong brownish tinge; vein  $R_2$  more than one-half its own length before the fork of  $R_{3+4}$ ; cell *1st*  $M_2$  narrow, about equal in length to vein  $M_4$ ; male hypopygium with the outer spine of basistyle unusually large, about two-thirds as long as the major spine, both spines hairy; inner dististyle with abundant long erect setae.

♂. Length about 7.5 mm.; wing  $7.8 \times 1.8$  mm.

Rostrum blackish gray; palpi black. Antennae black throughout; fusion-segment involving four segments, there being ten free ones beyond; verticils long and conspicuous. Head gray, the central portion of posterior vertex more infuscated.

Pronotum dark gray. Mesonotum dark brownish gray, the praescutum with four brown stripes that are moderately clear-cut, the intermediate pair about twice as wide as the median interspace; posterior sclerites of notum and the pleura clear gray. Halteres pale, knobs weakly infuscated. Legs with the coxae gray pruinose; trochanters obscure yellow; remainder of legs black, the femoral bases restrictedly obscure yellow; fore tibiae without spurs, middle and hind pairs spurred. Wings relatively narrow, as shown by the measurements; strongly tinged with brown, the extreme base more yellowed; stigmal region vaguely more darkened; veins dark brown. Venation:  $Sc_1$  ending just before the fork of  $Rs$ ,  $Sc_2$  longer, placed near its extreme tip; vein  $R_2$  more than one-half its own length before the fork of  $R_{3+4}$ ; cell *1st*  $M_2$  long and narrow, about equal to vein  $M_4$ ; cell  $M_1$  subequal to its petiole; *m-cu* about its own length beyond the fork of  $M$ ; vein *2nd*  $A$  straight, the cell relatively narrow.

Abdomen, including hypopygium, brownish black. Male hypopygium with the spines near the proximal end of basistyle more nearly equal in size than is the case in *ultima*, the outer

one about two-thirds the length of the major more basal spine and fully as stout, both provided with appressed setae. Inner dististyle with the elongate erect setae more abundant, erect and conspicuous.

*Habitat*.—GEORGIA. *Holotype*: ♂, Winder, Barrow Co., November 8, 1945 (*P. W. Fattig*).

*Neolimnophila capnioptera*, while allied to the common and wide-spread *N. ultima* (Osten Sacken), differs in the narrow darkened wings and in the details of structure of the male hypopygium, particularly the spines of the basistyle and the inner dististyle. In Japan and China, rather numerous further species of the genus occur and it seems possible that still other forms may be found to occur in the southern Appalachians, thus conforming to the type of geographical distribution found in many genera of plants and certain groups of Tipulidae (as *Dolichopeza*: *Oropeza*; *Dicranoptycha*).

Whether the genus *Neolimnophila* Alexander should be placed in the tribe Hexatomini or in the Eriopterini still remains in question. The middle and hind tibiae have long conspicuous spurs which is definitely a Hexatomine character but the affinities with such other groups as *Chionea* Dalman, *Cladura* Osten Sacken and *Crypteria* Bergroth seem so obvious that for the time being, at least, it seems better to retain all of these groups in the more primitive Eriopterini.

---

### Personal

**Dr. J. McDunnough**, outstanding specialist on North American Lepidoptera and recently retired chief of the Systematic Unit of the Division of Entomology, Canadian Department of Agriculture, has accepted a Research Associateship at the American Museum of Natural History, New York City, where he will continue his studies on North American moths. His work will be of particular value to the Museum since it has been many years since there has been a moth specialist on the staff of this institution. Dr. McDunnough's first research project will be to complete a revision of the large and difficult geometrid genus *Eupithecia*.